REMARKS

Claims 1-7, 9-16, 18-20, and 23-42 are currently pending. The claims have been amended to advance prosecution. Claims 8, 17, 21, and 22 have been canceled. Independent claim 1 has been amended with subject matter from dependent claims 6 and 8. Independent claim 11 has been amended with subject matter from dependent claims 15 and 17. Independent claim 20 has been amended with indicated-as-allowable subject matter from claim 22. Independent claim 27 has been amended with subject matter from claims 6, 8, and 28. Independent claim 29 has been amended with subject matter from claims 6, 8, 32, and 33. Independent claim 36 has been amended with subject matter from claims 6, 8, 39, and 40. Claims 2-7, 9, 10, 12-16, 18, 19, 23-26, 28, 30-35, and 37-40 have been amended for clarification. It is respectfully submitted that no new matter has been added.

The Patent Office rejected claims 1-10 under 35 U.S.C. 112, second paragraph, as being indefinite.

With the amendment of claim 1, it is respectfully requested that the Patent Office withdraw its reject of claims 1-10 as being indefinite under 35 U.S.C. 112, second paragraph.

The Patent Office rejected claims 1-6, 11-15, and 36-38 under 35 U.S.C. 102(e) as being anticipated by Otting, U.S. Patent No. 2002/0186675.

For a claim to be anticipated, each and every non-inherent claim limitation must be found in a single reference (from MPEP 2131).

Claim 1 recites as follows

> A mobile station executed method comprising: entering a new cell; generating a cell change logical link control packet data unit message for informing the network of the location of the mobile station in the new cell; buffering the cell change logical link control packet data unit message into a logical link control packet data unit message transmit queue such that it is selected for transmission prior to any buffered packet data units that were present before the mobile station entered the new cell; a radio link control/ medium access control unit of a mobile station initiating an uplink temporary block flow in the new cell; indicating to a radio link control/ medium access control of the network if an ACK or an UNACK radio link control mode is to be used when transmitting the cell change packet data unit message; and transmitting the buffered cell change packet data unit before any of the buffered packet data units that were present before the mobile station entered the new cell.

Claim 11 recites as follows:

> A mobile station comprising: a packet data buffer and a controller that is responsive to changing location from a previous cell to a new cell in a wireless packet data network for generating a cell change logical link control packet data unit message for informing the wireless packet data network of the presence of the mobile station in the new cell and for buffering the cell change logical link control packet data unit message into the packet data buffer such that it is selected for transmission prior to any buffered packet data units that were present before the mobile station entered the new cell, the controller being arranged to operate a radio link control/ medium access control unit to initiate an uplink temporary block flow in the new cell, and to indicate to a radio link control/ medium access control of the network if an ACK or an UNACK radio link control mode is to be used when transmitting the cell change logical link control packet data unit, said mobile station comprising a transmitter for transmitting the buffered cell change logical link control packet data unit message for informing the wireless packet data network of the cell in which the mobile station is currently located so that packet data intended for the mobile station is not transmitted into the previous cell by the wireless packet data network.

Claim 36 recites as follows:

> A device, comprising: means, responsive to entering a new cell, for generating a cell change logical link control packet data unit message for informing a wireless network of the location of the device; and means for buffering the cell change logical link control packet data unit message into a logical link control packet data unit message transmit queue such that it is transmitted to the wireless network before any already buffered packet data units that were present before the mobile station entered the new cell; means for initiating an uplink temporary block flow in the new cell; means for indicating to a radio link control/ medium access control of the network if an ACK or an UNACK radio link control mode is to be used when transmitting the cell change packet data unit message; and means for transmitting the buffered cell change packet data unit before any of the buffered packet data units that were present before the mobile station entered the new cell.

Otting does not disclose queues. In Otting's method and apparatus for reducing the impact of cell reselection of GPRS/EDGE data rates (abstract), when a mobile station switches cells, as shown in Figure 4, the last frame transmitted in the first cell is transmitted again in the

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new cell. Otting discloses that "a reselection completion signal 404 is transmitted from the physical layer 312 to adjustment module 324 of logical link control adjustment unit 304 at time t_{select}. (paragraph 0033). The Patent Office asserts that paragraph 0019 of Otting discloses "buffering the cell change PDU message into a PDU transmit queue (store LLC frame for packet transmission, see ¶. 19) before any PDUs that were present before the mobile station entered the new cell (when a new reselection is completed, packet data is transmitted to the other cell, that is, LLC PDU is stored before transmitting packet data, see ¶. 19)" Otting, in paragraph 0019, does not disclose buffering the cell change packet data unit message into a packet data unit transmit queue. Instead, Otting discloses, in paragraph 0019, that a reselection completion signal is sent to an adjustment module to adjust the logical link control frame size (e.g., page 2, right hand column, lines 1-4).

Thus, Otting does not anticipate claims 1-6, 11-15, or 36-38 for at least this one reason alone.

The Patent Office rejected claim 20 under 35 U.S.C. 102(e) as being anticipated by Lupien, U.S. Patent No. 6,463,055.

For a claim to be anticipated, each and every non-inherent claim limitation must be found in a single reference (from MPEP 2131).

cell change PDU is caused to be transmitted before any lower priority PDUs.

Claim 20 recites as follows:

> A method comprising: changing from a first cell to a second cell with a mobile station; and prior to a serving general packet radio service support node receiving at least one of a packet data unit and a message from the mobile station, notifying the serving general packet radio service support node of the mobile station cell change, wherein notifying the serving general packet radio service support node of the mobile station cell change comprises in response to the mobile station making access in the second cell, sending a channel request that indicates a cell update operation; establishing an uplink temporary block flow for transferring logical link control packet data units from the mobile station to the network; in response to the network receiving an unknown temporary logical link identifier from the mobile station, sending a message to the serving general packet radio service support node; and based on the

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message, determining with the serving general packet radio service support node that the mobile station is located in the second cell.

As claim 20 has been amended with the indicated as allowable subject matter of claim 22, it is respectfully submitted that claim 20 is in condition for allowance.

The Patent Office rejected claims 10, 19, 35, and 42 under 35 U.S.C. 103(a) as being unpatentable over Otting in view of Forslow.

Claim 10 recites as follows: "wherein the generating includes setting a priority level of the cell change packet data unit such that the buffering the cell change packet data unit message into the packet data unit transmit queue causes the cell change packet data unit to be transmitted before any lower priority packet data units."

Forslow is cited as providing a teaching for claim 10 subject matter in column 13, lines 25-47. However, this passage of Forslow does not disclose or suggest a "cell change packet data unit" or "setting a priority of the cell change packet data unit."

Accordingly, claims 10, 19, 35, and 42 are allowable over Lupien in view of Forslow.

The Patent Office rejected claims 24-26 under 35 U.S.C. 103(a) as being unpatentable over Lupien in view of Otting.

As claim 20 has been amended with the indicated as allowable subject matter of claim 22, it is respectfully submitted that its dependent claims 23-26 are also in condition for allowance.

The Patent Office rejected claims 27 and 28 under 35 U.S.C. 103(a) as being unpatentable over Lupien in view of Forslow.

Claim 27 recites as follows:

> A method comprising: passing a cell change logical link control packet data unit message to a radio link control unit for informing a network of the location of a mobile station in a new cell, the cell change logical link control packet data unit message having a flag for indicating a priority of the packet data unit relative to other packet data units; storing the cell change logical link control packet data unit message into a logical link control packet data unit message transmit message queue in accordance with the indicated priority; a radio link control/ medium access control unit of a mobile station initiating an uplink temporary block flow in the new cell; indicating to a radio link control/ medium access control of the network if an ACK or an UNACK radio link control mode is to be used

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when transmitting the cell change packet data unit message; and transmitting the stored cell change logical link control packet data unit to a radio channel before any stored packet data units having a lower priority.

The Patent Office in rejecting claim 27 asserts "it is a claim corresponding to claims 20 and 10 and is therefore rejected for the similar reasons set forth in the rejection of claims 20 and 10." It is noted that claim 10 has been rejected by the Patent Office as obvious over Otting in view of Forslow (column 13, lines 25-27) and claim 20 has been rejected by the Patent Office as anticipated by Lupien (Figure 9; column 29, line 43, through column 30, line 8; column 15, lines 35-49).

Lupien discloses in column 29, line 43, through column 30, line 8, as follows:

FIG. 9 is a message flow diagram illustrating the flow of signaling messages during a Cell Update procedure when an M-ES in the READY state enters a new cell in the current Routing Area. An M-ES in the READY state due to Anonymous Access does not perform routing area updates. If the M-ES has entered a new routing area, a new Anonymous Access PDP Context Activation procedure is initiated. The old context is implicitly deleted upon expiration of the READY timer. A cell update takes place when the M-ES enters a new cell inside the current RA, and the M-ES is in the READY state. If the RA has changed, an RA Update is executed instead of a cell update.

At 151, the M-ES 51 reselects the new cell's PCCH, and reads a fill cycle of broadcast information. The broadcast information includes the neighbor list, the serving cell's list of coincidental DCCH coverage, and Routing Area and Location Area Indicators. The M-ES acquires services on the new serving PCCH and automatically resumes transmission on the new channel at 152 by transmitting an uplink LLC frame of any type containing the M-ES's identity to the SGSN 35. The cell update consists of any correctly received and valid LLC PDU carried inside a BSGP PDU. The BS 49 adds the identifier of the cell to all BSGP frames transmitted towards the SGSN. The SGSN notices the cell update when the BSGP frames contain the cell identifier of a new cell. Note: From an RLC perspective, the proper mechanism must be in place to enable the M-ES to resume reception/transmission on the new channel with the least penalty in delay. The SGSN records the M-ES's change of cell, and further directs traffic towards the M-ES over the new cell. The SGSN is responsible for buffering and retransmitting unacknowledged LLC frames at 153, when acknowledged mode is used.

Lupien discloses, in column 15, lines 35-49, as follows:

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The SGSN must be able to detect when a location update is performed toward the ANSI-41 network. The use of broadcast location areas and routing areas on the PCCH defines a relationship between the GPRS MSC/VLR's serving area LAs and the GPRS serving area RAs. The mobile station must inform the SGSN of the need to perform a location update whenever a new LAI is detected on the PCCH, which also coincides with a newly detected RAI. The mobile station updates the SGSN on its position by sending a Routing Area Update Request and also indicating that an LA update shall be performed. RAIs are used to identify the association between the SGSN and the GPRS MSC/VLR through translation tables. The SGSN then forwards the LA update to the GPRS MSC/VLR. This RA and LA update may be referred to as a "Combined RA/LA update".

Forslow discloses, in column 13, lines 25-47, as follows:

The SGSN also classifies the packets corresponding to mobile subscriber ID (MSID), PDP context, and quality of service delay class. Preferably, the SGSN uses a fair queuing (e.g., bit wise round robin) algorithm for packet scheduling at the SNDCP/LLC level to merge several PDP contexts of the mobile terminal with the same quality of service delay class. A weighted fair queuing (WFQ) algorithm may be used for scheduling packet transfer at the BSSGP level using the tunnel bandwidth reservation data relating to each mobile terminal/quality of service delay class in order to merge LLC application flows of the same quality of service delay class from different mobile terminals in a single queue. The queued data is then transferred to the BSS, which classifies the incoming data by cell and quality of service delay class. As mentioned above, the BSS preferably uses a FIFO scheduling algorithm for each cell/quality of service delay class queue in addition to configurable values for priority queuing for different quality of service delay classes. The BSS then performs packet resource assignment at the RLC/MAC layers to transfer individual packets. The packets are generally divided into data blocks, and one radio data channel may be shared by several mobile terminals with each radio block having a separate identifier.

Forslow does disclose a weighted fair queuing algorithm, whereas Lupien does not appear to disclose or suggest a message queue. Neither of these references disclose or suggest "storing the cell change logical link control packet data unit message into a logical link control packet data unit message transmit message queue in accordance with the indicated priority," as recited in claim 27. The cited passages of Lupien and Forslow also do not disclose or suggest "passing a

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cell change logical link control packet data unit message to a radio link control unit for informing a network of the location of a mobile station in a new cell, the cell change logical link control packet data unit message having a flag for indicating a priority of the packet data unit relative to other packet data units."

Thus, claims 27 and is dependent claim 28 are not made obvious by Lupien in view of Forslow.

The Patent Office rejected claims 29-31 under 35 U.S.C. 103(a) as being unpatentable over Otting.

Otting does not disclose queues. In Otting's method and apparatus for reducing the impact of cell reselection of GPRS/EDGE data rates (abstract), when a mobile station switches cells, as shown in Figure 4, the last frame transmitted in the first cell is transmitted again in the new cell. Otting discloses that "a reselection completion signal 404 is transmitted from the physical layer 312 to adjustment module 324 of logical link control adjustment unit 304 at time t_{select}. (paragraph 0033). The Patent Office asserts that paragraph 0019 of Otting discloses "buffering the cell change PDU message into a PDU transmit queue (store LLC frame for packet transmission, see ¶. 19) before any PDUs that were present before the mobile station entered the new cell (when a new reselection is completed, packet data is transmitted to the other cell, that is, LLC PDU is stored before transmitting packet data, see ¶. 19)" Otting, in paragraph 0019, does not disclose buffering the cell change packet data unit message into a packet data unit transmit queue. Instead, Otting discloses, in paragraph 0019, that a reselection completion signal is sent to an adjustment module to adjust the logical link control frame size (e.g., page 2, right hand column, lines 1-4).

Thus, claims 29-31 are allowable over Otting.

The foregoing specific references are not to be construed as being exhaustive of all of the rejections made by the Patent Office with which the applicant is in disagreement.

The Patent Office is respectfully requested to reconsider and remove the rejection of claims 1-20 and 22-42 under 35 U.S.C. 102(e) based on Otting or Lupien or under 35 USC 103(a) based on Otting in view of Forslow, Lupien in view of Otting, Lupien in view of Forslow, or Otting, and to allow all of the pending claims 1-7, 9-16, 18-20, and 23-42 as now presented

for examination. An early notification of the allowability of claims 1-7, 9-16, 18-20, and 23-42 is

earnestly solicited.

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Respectfully submitted:

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_3-26 2008_   _Jessica Lee_

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